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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/583,629	05/31/2000	Samuel A. Cooper	15676-223495	4026
33072	7590	07/06/2006	EXAMINER	
KAGAN BINDER, PLLC SUITE 200, MAPLE ISLAND BUILDING 221 MAIN STREET NORTH STILLWATER, MN 55082			RUTLEDGE, DELLA J	
			ART UNIT	PAPER NUMBER
			2851	

DATE MAILED: 07/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/583,629

**Applicant(s)**

COOPER ET AL.

**Examiner**

D. Rutledge

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1 – 30, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai et al. (US Pat. No. 6,168,665) in view of Sugawara et al. (US Pat. 4,99,193).

In regard to claims 1- 6, 9, 21 – 27, 29, 30: Sakai et al. have a substrate processing apparatus. The apparatus may be used to coat a resist on a substrate and develop the coated resist; see column 17, lines 13 - 21. Figure 16 discloses a flow chart of the resist coating process, but does not provide every operation or action of each of the process steps. Sugarawara et al. is provided to illustrate the broad teaching that an apparatus has a means to respond to various events or actions within a process program. For example, Sugarawara et al. in Fig. 20, have a control program. The program has a step: “execution of program and controlling various kinds of interruption” and in case of interruption the program goes to the “interrupt program” subroutine which will cause various timers, settings and actions to be initiated or terminated. One of ordinary skill in the art would expect the Sakai et al. process in Fig. 16 to have a program execution and a control of interrupt subroutines. The Nguyen reference is cited because it teaches that subroutine can be called from interrupts triggered by timers. See column , lines of that reference. In view of the teaching from these references the various steps of Fig. 16 of Sakai et al. would be subroutines that act as

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process commands that may be triggered as interrupts by timers. The subroutines may in turn cause other timers to be set or reset within the subroutine.

Claims 10, 11, 15 – 17, 27: There are various processes that will be controlled at the same time such as monitoring and dispensing or stopping; dispensing and accelerating, etc.

In regard to claims 12 - 14, 18, 24 – 26, 28, 30: the duration of the process would be monitored and controlled to within the values claimed if a critical dimension or process is involved. Plural timers would be used with parallel processes. One of the timers will start at the time corresponding the time claimed.

In regard to claims 7, 8: Although the flow chart does not show controlling the acceleration and deceleration of the rotating chuck, these steps would be inherent. The triggering of the start and termination of dispensing of the coating or developing solution would be inherent.

### ***Conclusion***

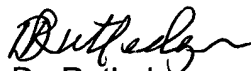
3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tanaka et al. (US Pat. No. 5,689,749) has a developing process shown in Figs. 7 and 16. The process discloses rotating the substrate at high and low speeds.

***Response Data***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. Rutledge whose telephone number is (571) 272-2127. The examiner can normally be reached on Mon - Thurs, 6:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
D. Rutledge  
Primary Examiner  
Art Unit 2851

dr  
6/27/2006